Title: FULLY DEPLETED SILICON-ON-INSULATOR CMOS LOGIC

## REMARKS

## Claim Rejections Under 35 U.S.C. §103

Claims 1-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Burr et al.* (U.S. Patent No. 5,942,781) in view of *Williams et al.* (U.S. Patent No. 6,078,090). Applicant respectfully traverses this amendment.

Burr et al. discloses an SOI device that includes an nfet 602 and a pfet 604. A layer 606 contains the source and drain regions 612, 614, 620, and 622 as well as the channel regions 616 and 624. The substrate includes an n+ well 650 and a p+ well 652, each having a bias contact 654 and 656. The substrate is separated from the top layer 606 by an insulating layer 608. This means the bias contacts 654 and 656 are also separated from the channel regions by the insulating layer 608.

The Examiner alleges that the bias contacts 654 and 656 of *Burr et al.* are the same as Applicant's claimed extractor contact. However, the extractor contact of the present invention is coupled to the body structure in the same SOI layer, as described in the specification at paragraphs 22 – 25 and shown in Figure 3. Therefore, *Burr et al.* neither teaches nor suggests providing an extractor contact in the SOI layer and reverse biasing the contact to remove minority carriers in the body structure as claimed in Applicant's present claims.

Williams et al. discloses that fast recover times can be achieved by reducing minority carrier lifetime through irradiation or doping. Williams et al. neither teaches nor suggests Applicant's method of generating a fully depleted body structure by reverse biasing an extractor contact coupled to the body structure in the SOI layer. Since neither Burr et al. nor Williams et al. individually teaches or suggests Applicant's invention as claimed, the combination of these references cannot teach or suggest Applicant's invention.

## RESPONSE TO NON-FINAL OFFICE ACTION

Serial No. 10/682,590

Attorney Docket No. 400.257US01

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## **CONCLUSION**

For the above reasons, Applicant respectfully requests that the Examiner withdraw the rejection and allow the present claims. If the Examiner has any questions or concerns regarding this application, please contact the undersigned at (612) 312-2211. No new matter has been added and no additional fee is required by this amendment and response.

Respectfully submitted,

Date:

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